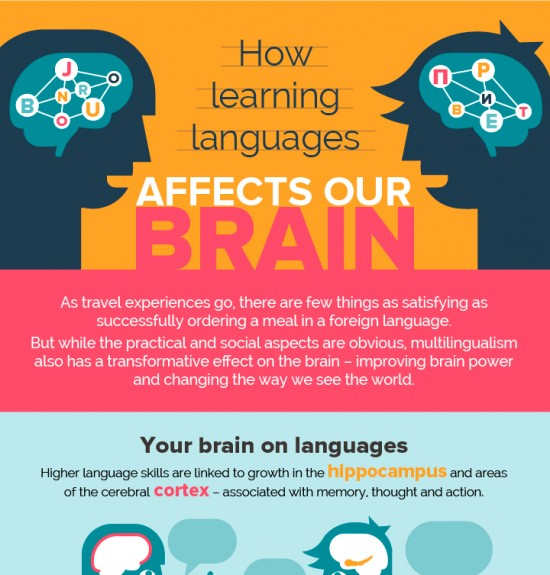
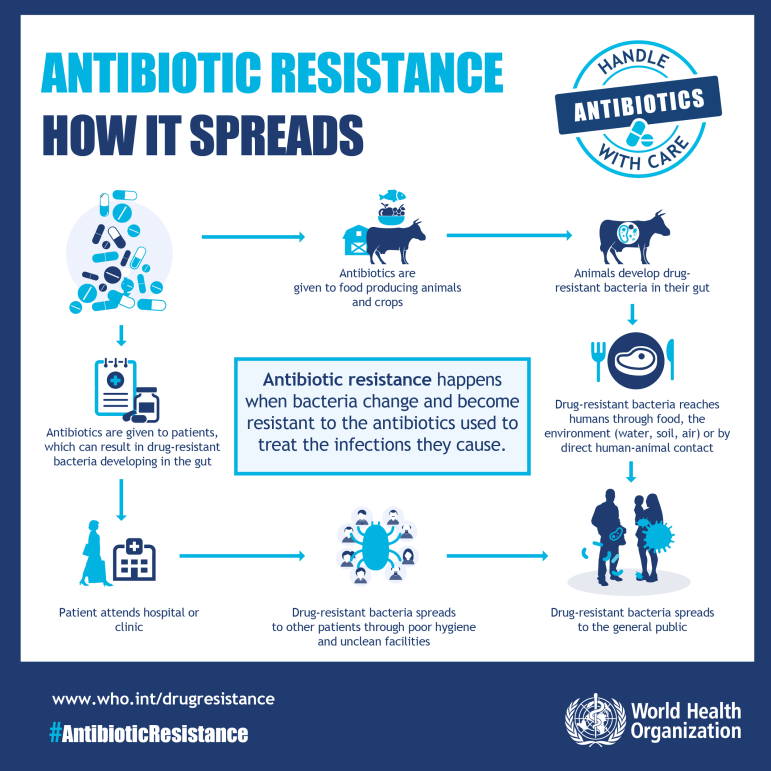
**Genetic Disorder Infographic Project**

Pre-AP Biology, Mrs. Krouse

**General Information:** For this project, you will create an infographic to inform others about a genetic disorder you have chosen to research. An infographic is like an online poster that organizes information and presents it in a visually-appealing way. Several examples of infographics are given below.



**Step 1--Choosing a Genetic Disorder:** Below, I have provided a list of disorders in humans that are caused by mutations in genes or portions of chromosomes. Additionally, some of these disorders involve the loss or gain of one or more full chromosomes. You will select a disorder from the list below to research. You can also select a different disorder, but you must get your choice approved by me before beginning research.

|  |  |  |
| --- | --- | --- |
| -Adenosine deaminase (ADA) deficiency  -Alpha-1 antitrypsin deficiency  -Cystic fibrosis  -Galactosemia  -Huntington’s disease  -Maple syrup urine disease (MSUD)  -Neurofibromatosis type 1  -Pachyonychia congenita | -Severe combined immunodeficiency  -Sickle cell disease  -Smith-lemli-opitz syndrome  -Achondroplasia  -Duchenne muscular dystrophy  -Hypercholesterolemia  -Marfan syndrome  -Tay-sachs disease  -Xeroderma pigmentosum | -Phenylketonuria  -Cri-du-chat syndrome  -Down syndrome  -Klinefelter syndrome  -Turner syndrome  -Williams syndrome  -Edward’s syndrome  -Patau’s syndrome  -Fragile-X syndrome |

**Step 2--Researching Your Genetic Disorder**

1. Learn Genetics (Genetic Science Learning Center)--University of Utah: <http://learn.genetics.utah.edu/content/disorders/>
2. National Institute of Health--Genetics Home Reference: <https://ghr.nlm.nih.gov/condition>
3. National Organization for Rare Disorders (NORD): <https://rarediseases.org/for-patients-and-families/information-resources/rare-disease-information/>
4. WebMD: <http://www.webmd.com/>
5. National Institute of Health (MedlinePlus): <https://medlineplus.gov/cysticfibrosis.html>
6. Mayo Clinic: <http://www.mayoclinic.org/diseases-conditions>

**Step 3--Making your Infographic**

1. What information do I need to include in my infographic?

* Identify all names for this disorder.
* Describe the genetic abnormality that is responsible for this disorder. Make sure to mention which gene(s) and/or chromosome(s) are involved.
* Explain how the genetic abnormality occurs. For example, if the disorder is caused by a gene mutation, identify the pattern of inheritance (i.e., autosomal dominant, autosomal recessive, X-linked dominant, X-linked recessive) shown by the disorder. If you are not sure what to include for this requirement, ask Mrs. Krouse.
* Identify the symptoms of the disorder and the life expectancy for someone who has the disorder.
* Describe the possible treatments for patients with the disorder.
* Describe how the disorder is diagnosed.
* Describe the prevalence (frequency) of the disorder using numerical data. If the disorder is more common in one sex (i.e., males or females) or is more common in a particular ethnic group (ex: people of european descent), make sure to mention this.
* Include at least two pictures, diagrams, charts, or graphs related to the disorder. You must clearly describe what is shown in these visuals in the text of your infographic. You must cite the image in proper MLA format in your works cited section.

2. How do I create and submit my infographic?

* You will be using a program called Piktochart to create your infographic. I will provide more details about how to create and submit your infographic in class, but you can use the following web address to watch a helpful tutorial video made by Piktochart: <https://piktochart.com/video-tutorials/> . You should select the video titled “Piktochart for Beginners.”

3. Can I copy information directly from a resource?

* ABSOLUTELY NOT. I am not allowing direct quotes for this assignment, so copying information from a source and using it in your infographic is considered plagiarism. You will receive zero credit for this assignment if you plagiarize.
* If you use five or more consecutive words from a source, this is considered plagiarism.
* You must create a works cited section in your infographic to give credit to the resources you used during your research. You must cite at least three resources in this works cited section. Your citations must be in proper MLA formatting. You can use [www.easybib.com](http://www.easybib.com) or [www.citationmachine.net](http://www.citationmachine.net) to make citations for you. To see how to format your works cited section, go to the following web address: <https://owl.english.purdue.edu/owl/resource/747/12/>
* Your works cited section can be in small font, but it MUST be on your infographic.

**Step 4--Checking the Rubric**

|  |  |
| --- | --- |
| **Requirement Description** | **Points Possible** |
| Identifying the name(s) of the disorder | /1 |
| Describing the genetic abnormality | /3 |
| Explain how the genetic abnormality occurs | /3 |
| Identifying symptoms and life expectancy | /3 |
| Describing possible treatments | /3 |
| Describing how the disorder is diagnosed | /3 |
| Describing the prevalence of the disorder using numerical data | /2 |
| Including at least two relevant visuals and clearly describing what is shown in these visuals | /2 |
| Organizing your infographic in a way that is clear and logical with readable text and appealing aesthetics | /3 |
| Including a works cited section with three legitimate sources cited in proper MLA format. | /3 |
| Submitting your infographic on time in the manner specified by Mrs. Krouse | /2 |

**Total: \_\_\_\_\_/28**